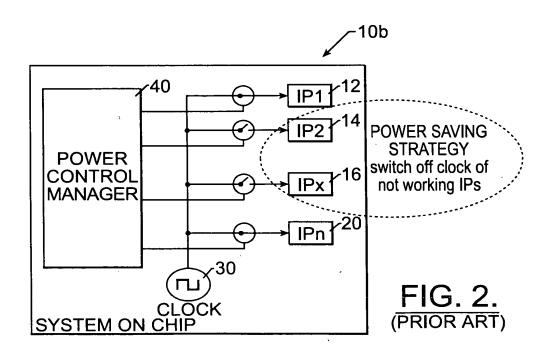
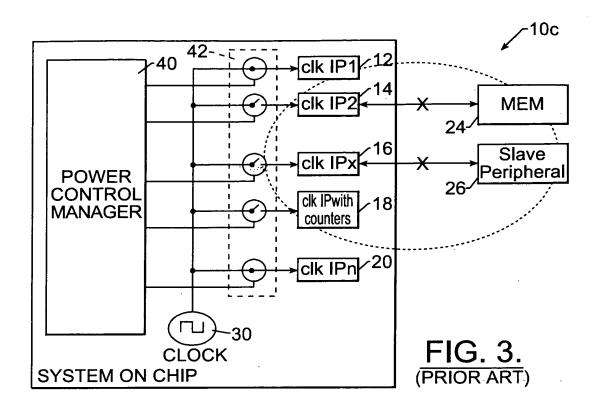


FIG. 1. (PRIOR ART)





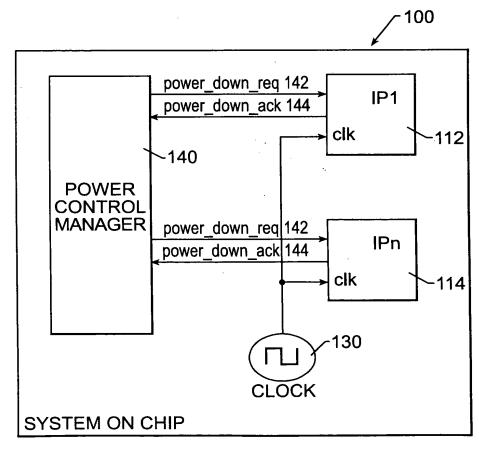
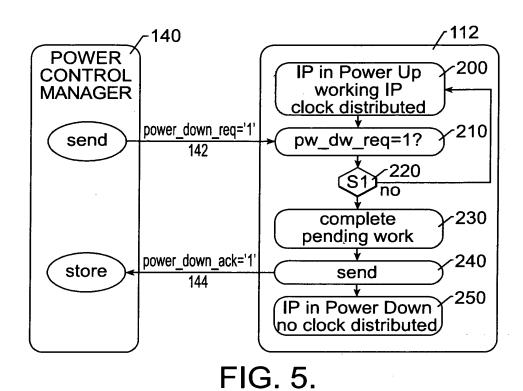


FIG. 4.



10.0.

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```
Power Down Manager:
    sent to the IP the power_down_req signal set to '1';

IP:

IF power_down_req is asserted (='1'):
    complete its pending work;
    set power_down_ack to '1';
    stop its own clock => IP halted;
    else
    normal work;

Power Down Manager:
    Stores the value of power_down_ack to allow visibility of IP status (power on/off);
```

FIG. 6.

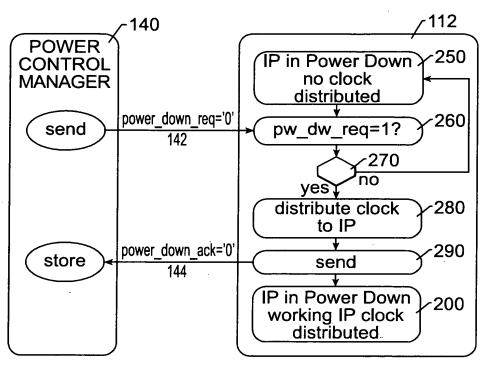


FIG. 7.

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Power Down Manager:
 sent to the IP the power_down_req signal set to '0';

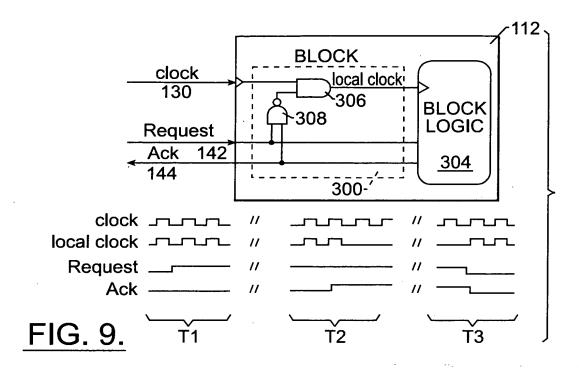
IP:

IF power_down_req is de_asserted (='0'):
 restarts its own clock;
 set power_down_ack = '0';
 restart to work;
 else

 no clock distributed to IP => IP halted;

Power Down Manager:
 Stores the value of power_down_ack to allow visibility of IP status (power on/off);

FIG. 8.



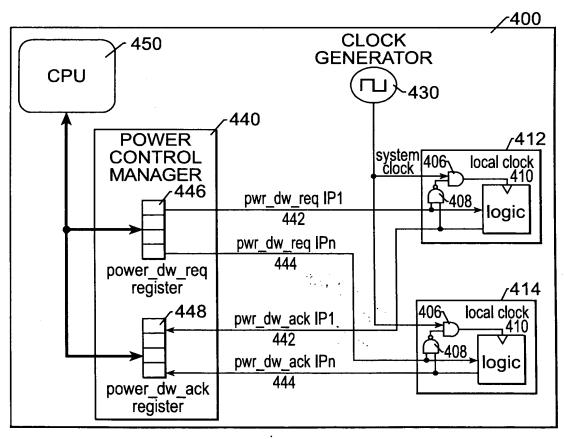


FIG. 10.